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# April 22, 2010

VIA HAND DELIVERY

RECEIVED

Jeff R. DeRouen Executive Director Kentucky Public Service Commission 211 Sower Blvd. Frankfort, KY 40602-0615 APR 22 2010

PUBLIC SERVICE COMMISSION

Re:

Case No. 2009-00548

Case No. 2009-00549

Dear Mr. DeRouen:

Enclosed please find for filing ten copies of the Kentucky Cable Telecommunications Association's Expert Testimony in the above referenced cases.

Thank you.

Very truly yours,

WYATT, TARRANT & COMBS, LLP

Frank F. Chuppe

FFC/lc Enclosures

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## COMMONWEALTH OF KENTUCKY

APR 22 2010

# BEFORE THE PUBLIC SERVICE COMMISSION

PUBLIC SERVICE COMMISSION

		CASE NO.
APPLICATION OF LOUISVILLE	)	2009-00549
GAS AND ELECTRIC COMPANY FOR	)	
AN ADJUSTMENT OF ITS ELECTRIC	<b>)</b>	
AND GAS BASE RATES	,	

# **DIRECT TESTIMONY**

**OF** 

# PATRICIA D. KRAVTIN

Submitted on

Behalf of

The Kentucky Cable Telecommunications Association

April 22, 2010

- Q: PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND OCCUPATION.
- A: My name is Patricia D. Kravtin. My business address is 57 Phillips Avenue,

  Swampscott, Massachusetts. I am an economist in private practice specializing in the analysis of telecommunications regulation and markets.
- Q: PLEASE SUMMARIZE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.
- A: I received a B.A. with Distinction in Economics from the George Washington University. I studied in the Ph.D. program in Economics under a National Science Foundation Fellowship at the Massachusetts Institute of Technology ("M.I.T."). My fields of concentration at M.I.T. were government regulation of industry, industrial organization, and urban and regional economics. My professional background includes a wide range of consulting experiences in regulated industries. Prior to starting my own consulting practice, I was a consultant at the national economic research and consulting firm of Economics and Technology, Inc. ("ETI") in that firm's regulatory consulting group, where I held positions of increasing responsibility, including Senior Vice President/Senior Economist.
- Q: WHAT IS YOUR EXPERIENCE SERVING AS AN EXPERT IN PROCEEDINGS
  RELATED TO TELECOMMUNICATIONS MATTERS?
- A: I have testified or served as an expert on telecommunications matters in proceedings before over thirty state regulatory commissions. I have also provided expert testimony and reports in proceedings before the Federal Communications Commission ("FCC") and before international agencies including the Canadian Radio-television and

Telecommunications Commission, the Ontario Energy Board, and the Guam Public Utilities Commission. In addition, I have testified as an expert witness in antitrust litigation in federal district court, and also before a number of state legislative committees. A detailed resume summarizing my educational background and previous experience is provided in Attachment 1 to my testimony.

Over the course of my career, I have been actively involved in a number of state and federal regulatory commission proceedings involving cost methodologies and the allocation of costs of incumbent local exchange carriers ("ILECs") and electric utilities. One local network component, essential for the provision of competitive communications services, with which I am also very familiar, is access to poles, ducts, conduits, and rights-of-way. I have testified extensively on matters pertaining to these essential facilities before state and federal regulatory agencies and district courts. I have also been actively involved in related issues pertaining to broadband deployment. I have authored a number of reports dealing with this subject and participated as a grant reviewer for the Broadband Technology Opportunities Program ("BTOP") administered by National Telecommunications and Information Administration ("NTIA").

# Q: CAN YOU DESCRIBE YOUR EXPERIENCE IN POLE ATTACHMENTS PROCEEDINGS?

A: Yes. I have submitted reports in pole proceedings before the FCC, including its most recent rulemaking proceeding, In the Matter of Implementation of Section 224 of the Act; Amendment of the Commission's Rules and Policies Governing Pole Attachments, WC Docket No. 07-245, RM 11293, RM 11303 (FCC 2008 NPRM Proceeding). I have

served as an expert or advisor on pole attachment matters in proceedings involving investor-owned utilities, non-profit consumer-owned utilities, and municipally-owned utilities, and before the following state regulatory commissions: the Arkansas Public Service Commission, the Public Utilities Commission of Ohio, the Public Utilities Commission of Texas, the Georgia Public Service Commission, the South Carolina Public Service Commission, the Public Service Commission of the District of Columbia, the New Jersey Board of Public Utilities, and the New York Public Service Commission.

### O: HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?

- A: Yes, I testified before the Kentucky Public Service Commission (KPSC or Commission) in connection with two South Central Bell Telephone Company rate cases, Case No. 8847 (1984) and Case No. 8467 (1982), on behalf of the KPSC staff and the Commonwealth of Kentucky, respectively.
- Q: WHY HAS THE KENTUCKY CABLE TELECOMMUNICATIONS
  ASSOCIATION ASKED YOU TO PRESENT TESTIMONY IN THIS
  PROCEEDING?
- A: I was asked by the Kentucky Cable Telecommunications Association (KCTA) to address matters raised in this proceeding relating to the pole attachment rental rates that Louisville Gas and Electric Company (LG&E) charges cable operators. In particular, my testimony provides calculations of fair, just and reasonable pole attachment rental rates applicable to LG&E. I have based my testimony on the uniform formula methodology for calculating cable attachment charges established by the KPSC in Administrative Case

No. 251, and in subsequent KPSC rulings addressing the application of its pole rate formula.

### Q: PLEASE SUMMARIZE YOUR TESTIMONY.

A: The need for effective pole regulation arose, because cable operators and other thirdparties had no practical alternative but to attach to existing pole lines – a condition as
relevant today as it was decades ago. In the absence of effective pole regulation, poleowning utilities, because of their historical incumbency, would be in a position to limit
access to these essential bottleneck facilities and/or to extract excessive monopoly rents.

Moreover, without effective regulation, a utility's monopoly control over poles makes it a
gatekeeper controlling the availability of new advanced broadband services and
applications in its service area. This scenario is precisely the type of behavior that pole
regulation, nationally, and here in Kentucky following the state's certification to selfregulate pursuant to Administrative Case No. 251, was designed to address.

In Administrative Case No. 251, the KPSC established a uniform pole rate formula designed to "produce a fair, just and reasonable rate, based on the fully allocated costs of the utility in furnishing pole attachment services." The KPSC formula consists of three basic components: "(1) embedded cost of an average bare pole of the utility of the type and size which is or may be used for the provision of a CATV attachment (2) multiplied

<sup>&</sup>lt;sup>1</sup> In the Matter of the Adoption of a Standard Methodology for Establishing Rates for CATV Pole Attachments, Administrative Case No. 251, Amended Order (Admin. 251), Kentucky Public Service Commission, September 17, 1982.

<sup>&</sup>lt;sup>2</sup> Id. at 8.

by an annual carrying charge, and (3) this product multiplied by the percentage of usable space used for CATV pole attachments."<sup>3</sup>

Applying the KPSC formula methodology to LG&E's data, I have calculated the maximum pole attachment rates that LG&E should be permitted to charge third-party cable operators to attach to its poles. My calculations are consistent with the fair, just and reasonable standard set forth in Administrative Case No. 251 and in subsequent KPSC rulings. The rate results are summarized below, with supporting calculations provided in Attachment 2 to this testimony.

Maximum LG&E Cable Pole Attachment Rates For Test Year Ending October 31, 2009		
Two-User	Three-User	Weighted Average
\$4.44	\$3.74	\$3.88

Rates calculated using the KPSC formula methodology are cost-based, subsidy-free, and fully compensatory to the utility. In the case of LG&E, the pole attachment rate of \$4.92 that the utility is currently charging cable operators is in excess of the rate produced by a proper application of the KPSC formula as shown in the table above. In light of this fact, permitting rates to increase to even higher levels such as proposed by LG&E would run counter to the ultimate purposes of effective pole rate regulation. In my opinion, LG&E's current pole attachment rate of \$4.92 should stay in effect until such time that LG&E, in a subsequent rate case, and based upon a proper application of the KPSC formula as described in this testimony, can justify charging a higher rate.

3 Id.

As with any formulaic approach, the accuracy and integrity of the KPSC formula depends on the accuracy and integrity of the underlying data inputs. For this reason, it is very important that the data inputs are subjected to careful scrutiny and held to a high standard as to their reliability, accuracy, consistency, and ability to be verified.

In this case, LG&E's calculations of its proposed pole attachment rates contain a number of errors with regard to key data inputs, including the adjustment for minor appurtenances applied to bare pole costs, and the rate of return, income tax, depreciation sinking fund, and operation and maintenance elements of the carrying charge factor. Based on these erroneous data inputs, LG&E calculates a pole attachment rate for cable of \$8.52. This rate represents a 73% increase over the current pole rate, and exceeds the fair, just and reasonable rate pursuant to the KPSC formula methodology by 120%.

#### O: WHAT IS THE PURPOSE OF POLE RATE REGULATION?

A: The primary purpose of pole rate regulation has historically been, and continues to be, about protecting cable operators and other third-party attachers against monopoly abuses of pole-owning utilities. In this important context, the purpose of pole rate regulation has not been about maximizing third-party contribution to the revenue requirement for the utility's core electric services (which is properly recoverable from the utility's ratepayers for whom the pole network was built and maintained), but rather to *limit* the rents that utilities are permitted to charge third-party attachers to levels more in line with what a competitive market (if one existed, which it does not) would produce.

Fundamental to pole rate regulation is recognition of the fact that pole-owning utilities, by virtue of historical incumbency, own and control existing pole plant to which cable operators and other third-parties have no practical alternative but to attach. Where a utility has absolute control over essential bottleneck facilities, in the absence of effective pole regulation, pole-owning utilities are in a position to limit access to these essential bottleneck facilities and/or to extract excessive monopoly rents. This control of the essential bottleneck pole facility effectively affords the utility a key gatekeeper role with respect to the roll-out and availability of new advanced broadband services and applications in its service area. Preventing a pole-owning utility from charging excessive rates to the detriment of competition and the consuming public, is precisely what pole regulation nationally, and here in Kentucky following the state's certification to self-regulate pursuant to Administrative Case No. 251, was designed to address.

# Q: ARE THERE PUBLIC POLICY REASONS FOR PREVENTING UTILITIES FROM CHARGING EXCESSIVE RATES?

A: Yes. Excessive rates serve no valid economic or public policy purpose. To the contrary, such excessive rates work at cross purposes to important public policy goals - namely, to promote effective competition and widespread broadband deployment. This is particularly the case in rural areas, where the economic conditions for broadband deployment (e.g., lower population densities resulting in higher construction costs per capita) are the most unfavorable.<sup>5</sup>

<sup>&</sup>lt;sup>4</sup> See *NCTA v. Gulf Power*, 534 U.S. 327, 330 (2002) ("Since the inception of cable television, cable companies have sought the means to run a wire into the home of each subscriber. They have found it convenient, and often essential, to lease space for their cables on telephone and electric utility poles. Utilities, in turn, have found it convenient to charge monopoly rents.").

<sup>&</sup>lt;sup>5</sup> These are all points emphasized in the FCC's just-released National Broadband Plan, which recommends rates for pole attachments be set as low and as close to uniform (in the vicinity of the current cable rate) as possible to support the goal of broadband deployment, particularly in rural areas where the "impact of these rates can be

# Q: HOW IMPORTANT IS THE PROPER APPLICATION OF THE KPSC POLE RATE FORMULA TO LG&E?

A: Given the increased opportunities for utilities to compete with third-party attachers and the economic and social benefits of accelerated and enhanced broadband deployment, effective pole rate regulation is more important than ever. For that regulation to be effective, it is essential that the utility's implementation of the KPSC formula be carefully scrutinized.

As with any formulaic approach, the accuracy and integrity of the formula depends on the accuracy and integrity of the underlying data inputs. For this reason, it is very important that the data inputs to the formula are subjected to careful scrutiny and held to a high standard as to their reliability, accuracy, consistency, and ability to be verified. This is also consistent with the KPSC's directive that the "various cost factors needed to apply the formula should be readily available public information, such as disclosed in the utility's required reports to the Commission or other public agencies."

### O: PLEASE DESCRIBE THE KPSC FORMULA METHODOLOGY.

A: The KPSC formula methodology for calculating pole attachment rates applicable to thirdparty cable operators consists of three basic components as follows: "(1) embedded cost of an average bare pole of the utility of the type and size which is or may be used for the provision of a CATV attachment (2) multiplied by an annual carrying charge, and (3) this

particularly acute." See *Connecting America: The National Broadband Plan*, March 16, 2010, at 110. http://www.broadband.gov/plan/#read-the-plan

<sup>&</sup>lt;sup>6</sup> Admin. 251 at 8.

product multiplied by the percentage of usable space used for CATV pole attachments."<sup>7</sup> Expressed as an equation, the basic KPSC formula methodology is as follows:

Cable Pole Attachment Rate = [Average Bare Pole Cost x Investment Percentage] x

Carrying Charge Factor x Usable Space Factor

In Administrative Case No. 251, and in subsequent rulings addressing the application of its pole rate formula, the KPSC identified with specificity the manner in which these basic components are to be calculated.

- Q: PLEASE DESCRIBE HOW THE FIRST TWO COMPONENTS OF THE FORMULA, THE EMBEDDED COST OF AN AVERAGE BARE POLE AND THE INVESTMENT PERCENTAGE, ARE CALCULATED FOR ELECTRIC UTILITIES UNDER THE KPSC FORMULA METHODOLOGY.
- A: Under the KPSC methodology, the average bare pole cost is based on the "weighted average cost of two-user and three-user poles...For electric utilities, the average cost of a two-user pole will be assumed to be the weighted average cost of 35-foot and 40-foot poles, and for a three-user pole, the weighted average cost of 40-foot and 45-foot poles."

  The KPSC's methodology specifically excludes from the calculation the costs for poles with heights lower or higher than this range because the KPSC found them to be used so infrequently for cable attachments. 9

<sup>&</sup>lt;sup>7</sup> Id.

<sup>&</sup>lt;sup>8</sup> Id. at 10-11.

<sup>&</sup>lt;sup>9</sup> Id. at 9.

In addition, the KPSC's methodology specifically excludes costs associated with appurtenances not installed for CATV purposes. <sup>10</sup> The KPSC methodology distinguishes between two types of appurtenances – major and minor – as follows: Costs associated with major appurtenances, such as cross arms, and which "can be specifically identified in sub-accounts of the Federal Energy Regulatory Commission ("FERC") Form 1, Account 364" are to be directly excluded from the bare pole cost calculation. <sup>11</sup> Costs associated with minor appurtenances, consisting of miscellaneous hardware not segregated in the basic pole accounts (e.g., aerial cable clamps and pole top pins ) are to be excluded by application of a 15% investment percentage factor to the bare pole cost (net of major appurtenances). <sup>12</sup>

# Q: PLEASE DESCRIBE THE SECOND COMPONENT OF THE KPSC FORMULA, THE ANNUAL CARRYING CHARGE FACTOR, AND HOW IT IS APPLIED.

A: The annual carrying charge factor (CCF) is used to convert the bare pole cost figure into an annual rental amount. The CCF was "designed to recover the utility's cost in providing service," including items "represent[ing] an equitable share of all operating and maintenance expenses, taxes, and depreciation, and a cost of money component," and a "contribution by CATV toward the common costs of the utility." The Commission specified that the cost of money factor "should be equal to the return on investment (or

<sup>&</sup>lt;sup>10</sup> Id.

<sup>11</sup> Id. at 9, Appendix A at 5.

<sup>&</sup>lt;sup>12</sup> See id. at 9-10, Appendix A at 4-5. See also *In the Matter of Application of Jackson Purchase Energy Corporation for Adjustments in Existing Cable Television Attachment Tariff*, Case No. 2004-00319, September 14, 2005, at 2-3 ("ULS&P should reconstruct separate cost records for major appurtenances, such as anchors, crossarms and braces, and estimate bare pole costs by deducting the cost of the major appurtenances plus 15 percent for minor appurtenances, such as aerial cable clamps and pole top pins…").

<sup>13</sup> Admin. 251 at 11-12.

margin) allowed in the utility's last rate case."<sup>14</sup> The Commission further specified that "[t]he costs included in the annual carrying charge calculation should be identifiable by specific account number as established in the Uniform System of Accounts prescribed by this Commission and utilized by each utility."<sup>15</sup>

# Q: PLEASE DESCRIBE HOW THE THIRD COMPONENT, THE USABLE SPACE FACTOR, IS APPLIED TO ELECTRIC UTILITIES UNDER THE KPSC METHODOLOGY.

A: The usable space factor is the percentage of pole capacity attributable to the attacher, as determined by the ratio of space occupied by attacher (agreed to be one foot) to total usable space on the pole. The KPSC methodology applies a different usage space factor to two-user and three-user poles, consistent with its differing height presumptions for the two categories of poles. Specifically, the KPSC methodology establishes a usage space factor of .1224 (1/8.17) for the typical two-user pole and .0759 (1/13.17) for the typical three-user pole.

# Q: HAVE YOU CALCULATED FAIR, JUST AND REASONABLE POLE ATTACHMENT RENTAL RATES APPLICABLE TO LG&E BASED ON THE KPSC RATE FORMULA METHODOLOGY AS DESCRIBED ABOVE?

A: Yes. Once the various pieces of input data are properly identified, the calculation of the maximum fair, just and reasonable rate pursuant to the KPSC formula methodology is a straightforward multiplication of the three major components: weighted average bare pole cost (net of major and minor appurtenances) multiplied by the carrying charge

<sup>&</sup>lt;sup>14</sup> Id. at 12.

factor multiplied by the usable space factor. As allowed by the Commission, I have calculated a single "composite billing rate based on relative pole populations" of two-user and three-user poles, in addition to the required two and three-user pole rates. <sup>16</sup> My calculations (provided in Attachment 2 to this testimony) fully adhere to the KPSC rate formula methodology as prescribed in Administrative Case No. 251, and as clarified in subsequent orders addressing the pole rate formula.

# Q: WHAT DATA HAVE YOU USED TO CALCULATE POLE ATTACHMENT RATES FOR LG&E?

A: I have relied upon data provided by LG&E in its filing and in response to discovery requests from KCTA. These include Seelye Exhibit 11, as revised in response to KCTA's Supplemental Data Request dated April 2, 2010, and the underlying accounting records for the relevant accounts and sub-accounts of the Federal Energy Regulatory Commission ("FERC") Uniform System of Accounts, i.e., FERC Form 1, that LG&E provided in response to KCTA's Initial Data Request dated March 1, 2010.

# Q: BASED ON YOUR CALCULATIONS, WHAT RATES WOULD BE FAIR, JUST AND REASONABLE FOR CABLE ATTACHMENTS TO LG&E'S POLES?

A: Table 1 on the following page presents the results of my rate calculations using data for the test year ending October 31, 2009.

<sup>&</sup>lt;sup>15</sup> Id. at 11.

<sup>&</sup>lt;sup>16</sup> Id. at 16. ("Although we require that a two-user and three-user rate be developed and filed by each affected utility, the Commission will allow a composite billing rate based on relative pole populations when a complete inventory of CATV pole attachments is not presently available.")

Table 1 Maximum LG&E Pole Rental Rates For Test Year Ending October 31, 2009				
	Two-User Pole	Three-User Pole		
Avg. Bare Pole Cost	\$366.90	\$498.25		
x Carrying Charges	9.89%	9.89%		
x Space Factor	12.24%	7.59%		
=Maximum Rate	\$4.44	\$3.74		
No. Att. Entities	17,699	68,646		
Weight	20.5%	79.5%		
= Weighted Max Rate	\$3	\$3.88		

In the case of LG&E, the pole attachment rate of \$4.92 that the utility is currently charging cable operators is in excess of the rate produced by a proper application of the KPSC formula as shown in the table above. In light of this fact, permitting rates to increase to even higher levels such as proposed by LG&E would run counter to the ultimate purposes of effective pole rate regulation. In my opinion, LG&E's current pole attachment rate of \$4.92 should stay in effect until such time that LG&E, in a subsequent rate case, and based upon a proper application of the KPSC formula as described in this testimony, can justify charging a higher rate.

# Q: DO YOUR CALCULATIONS AND RESULTING RATE RESULTS DIFFER FROM THOSE PROVIDED BY LG&E IN THIS CASE?

A: Yes, they differ as to a number of data inputs to the formula. The calculations underlying LG&E's proposed pole attachment rates contain a number of errors with regard to inputs to the formula, including the adjustment for minor appurtenances applied to bare pole

costs, and the rate of return, income tax, depreciation sinking fund, and operation and maintenance elements of the carrying charge factor. My calculations correct for these errors in a manner fully consistent with the Commission's decision in Administrative Case. No. 251 and in subsequent rulings of the Commission that address the pole rate formula. Relying on a number of erroneous data inputs, LG&E calculates a pole attachment rate for cable of \$8.52. This rate represents a 73% increase over the current pole rate, and exceeds a fair, just and reasonable rate by 120%.

- Q: PLEASE DESCRIBE THE ERROR IN LG&E'S CALCULATIONS RELATING
  TO BARE POLE COSTS, AND HOW IT IS CORRECTED IN YOUR RATE
  CALCULATIONS.
- As discussed earlier in this testimony, the KPSC methodology specifically excludes costs associated with *both* major and minor appurtenances from the calculation of the bare pole cost. Under the KPSC methodology, the utility is expected to separately track the costs of major appurtenances in various sub-accounts of Account 364 such that those costs can be excluded on a direct basis using the accounting records of the utility. <sup>17</sup> By contrast, the costs associated with minor appurtenances, consisting of miscellaneous hardware, are neither required nor expected by the Commission to be separately tracked in the pole accounting records of the utility. Under the KPSC methodology, these costs are to be excluded by application of a 15% investment percentage factor to the bare pole cost amount (net of major appurtenances).

<sup>&</sup>lt;sup>17</sup> See In the Matter of: The CATV Pole Attachment Tariffs of the Union Light, Heat and Power Company, Administrative Case No. 251-27, July 14, 1983, at 2-3. ("Therefore, to conform to the Commission's Amended Order of September 17, 1982, ULH&P should reconstruct separate cost records for major appurtenances, such as anchors, cross-arms, and braces, and estimate bare pole costs by deducting the cost of the major appurtenances plus 15 percent for minor appurtenances, such as aerial cable clamps and pole top pins...").

LG&E's rate calculations do not apply the required 15% reduction to remove the costs of minor appurtenances. Accordingly, LG&E's bare pole cost formula inputs are overstated by 15%. My calculations correct for this error by applying the Commission's mandated 15% reduction to LG&E's recorded investment in the relevant pole plant categories. This correction reduces the average bare pole cost from \$431.64 to \$366.90 for two-user poles, and from \$586.18 to \$498.25 for three-user poles.

LG&E asserted in response to a KCTA discovery request that the costs of minor appurtenances have been directly excluded in the same manner as major appurtenances, claiming these costs have been separately recorded in its continuing property records.<sup>18</sup> The continuing property records provided by LG&E in discovery, however, do not reveal any separate recording of the costs of minor appurtenances.<sup>19</sup> Absent accounting records that can specifically confirm the separate identification and removal of minor appurtenances from the pole plant investment recorded in Account 364, a proper application of the KPSC methodology dictates that the 15% percentage reduction be applied consistent with the Commission's ruling in Administrative Case No. 251 and in subsequent rulings.<sup>20</sup>

<sup>&</sup>lt;sup>18</sup> LG&E Response to KCTA Supplemental Data Request, dated April 2, 2010, Question No. 31.

<sup>&</sup>lt;sup>19</sup> See Attachment to LG&E Response to KCTA 1-2. According to LG&E's response, this attachment (provided in CD format) contains LG&E's complete continuing property records for Account 364. The following is a complete list of the types of property separately recorded in the account: brackets, cross-arms, fences, guys, platforms, poles of varying sizes and materials, and towers.

<sup>&</sup>lt;sup>20</sup> See *In the Matter of: The CATV Pole Attachment Tariff of Kentucky Power Company*, Administrative Case No. 251-24, July 6, 1983, at 3 (Holding that the utility "should either show" data supporting its actual bare pole costs "or deduct 15 percent for minor appurtenances according to the Commission's uniform method of estimating bare pole costs.")

- Q: PLEASE DESCRIBE THE ERROR IN LG&E'S CALCULATIONS RELATING
  TO THE RATE OF RETURN ELEMENT OF THE CARRYING CHARGE
  FACTOR, AND HOW IT IS CORRECTED IN YOUR RATE CALCULATIONS.
- A: For the rate of return component of the carrying charge factor, LG&E uses its proposed rate of return of 8.32%. As an initial matter, any rate of return input at this time is only a placeholder for the authorized rate of return ultimately allowed by the Commission in its decision regarding this case.<sup>21</sup> Accordingly, the pole attachment rates I have calculated will need to be adjusted to reflect the final rate of return authorized by the Commission.

More importantly, LG&E's rate of return element contains a fundamental error by applying to gross pole costs a rate of return that is intended to apply to net plant investment.<sup>22</sup> The effect of LG&E's application of a "net" rate of return number to a gross investment number is to significantly overstate the carrying costs associated with the cost of money element.

My calculations correct for this error by adjusting LG&E's proposed rate of return so that the calculation is performed on an "apples-to-apples" basis. I do this by simply applying a net-to-gross percentage based on the ratio of net pole plant (i.e. gross plant less accumulated depreciation) in Account 364 to gross pole plant in Account 364 in order to

<sup>&</sup>lt;sup>21</sup> See Admin. 251 at 12 ("For convenience and certainty of computation, the Commission finds that this return should be equal to the return on investment (or margin) allowed in the utility's last rate case.")

<sup>&</sup>lt;sup>22</sup>See In the Matter of: Application of Blue Grass Energy Cooperative Corporation to Adjust Its Rates, Case No. 2000-414, May 30, 2001, at 4. ("It is today, and has for decades been, a basic rate-making principle in Kentucky that a utility's rate of return is determined based on net rather than gross investment.")

restate the rate of return element as a number that can be properly applied to gross investment. This net-to-gross ratio of .441, multiplied by LG&E's "net" rate of return of 8.32%, yields an adjusted rate of return of 3.67%.

The adjustment I have applied is fully consistent with prior rulings of the KPSC. In 2001, the Commission issued two rulings to "definitively resolve this issue."<sup>23</sup> As stated by the Commission in one of those decisions:

Regardless of any uncertainty as to the intent in Admin. 251, basic rate-making involves establishing, directly or indirectly, an overall rate of return based on net investment rate base. That is how the overall rate of return of 9.20 percent proposed by Blue Grass was developed in Fox Creek RECC's last general rate case, as well as how the 10.73 percent overall rate of return was developed in Blue Grass RECC's last general rate case. We can find no authoritative support for applying a utility's investment in gross plant to a return derived from net plant.<sup>24</sup>

The Commission specifically endorsed the methodology proposed by KCTA in both the aforementioned cases – the same methodology I have applied in my calculations. That methodology requires the utility to "adjust the rate of return to reflect the ratio of [the utility's] net plant investment recorded in Account 364, Poles, Towers, and Fixtures, to its gross plant investment in Account 364 and then apply the resulting 'net-to-gross ratio' to the 'gross' average pole cost amounts."<sup>25</sup>

<sup>&</sup>lt;sup>23</sup> See In the Matter of Application of Cumberland Valley Electric, Inc. to Adjust Its Rates, Case No. 2000-359, February 26, 2001, at 4.

<sup>&</sup>lt;sup>24</sup>See In the Matter of Application of Blue Grass Energy Cooperative Corporation to Adjust Its Rates, Case No. 2000-414, April 4, 2001, at 4-5.

<sup>&</sup>lt;sup>25</sup> Id. at 4.

Because the rate of return input is also used in the calculation of the income tax and depreciation sinking fund elements of the carrying charge factor, LG&E's error in applying a net rate of return figure to gross pole investment also affects these two components of the carrying charge factor, as explained below.

# Q: PLEASE EXPLAIN YOUR CORRECTION TO THE INCOME TAX ELEMENT OF THE CARRYING CHARGE FACTOR AS IT PERTAINS TO THE RATE OF RETURN DATA INPUT.

A: The income tax element of the carrying charge factor is intended to recover the income tax liability theoretically imposed on the equity component of the utility's allowed return. In other words, this factor ensures that the utility has the opportunity to earn the allowed rate of return after accounting for taxes. For the same reason the Commission found it improper to apply a "net" overall rate of return figure to gross pole investment, it is similarly improper to apply a "net" return on equity figure (as LG&E has done) in the calculation of the income tax factor. And similarly, the effect of LG&E's application of a "net" return on equity to gross pole investment is to significantly overstate the carrying costs associated with the income tax element.

To correct for this problem, I simply apply to the income tax element the same net-to-gross ratio I used to correct the rate of return element of the carrying charge. This generates a return on equity for the income tax element that can be properly applied to gross pole investment. Specifically, I multiply a net-to-gross ratio of .441 times LG&E's

<sup>&</sup>lt;sup>26</sup>The debt component of the return does not generate a tax liability.

<sup>&</sup>lt;sup>27</sup> The income tax factor is calculated using the following formula: Income Tax = [Composite Federal and State Income Tax Rate / (1-Composite Federal and State Income Tax Rate)] x Return on Equity. See Seelye, Exhibit 11, page 2.

"net" return on equity of 6.19% to yield an adjusted return on equity of 2.73%. Making this correction reduces the income tax element of the carrying charge factor from 3.63% to 1.60%. While I have used LG&E's proposed return on equity (adjusted to apply to gross pole investment) in my calculations, as with the overall rate of return, this figure is only a placeholder for the allowed return on equity ultimately authorized by the Commission in this case.

- Q: PLEASE EXPLAIN YOUR CORRECTION TO THE DEPRECIATION SINKING
  FUND ELEMENT OF THE CARRYING CHARGE FACTOR AS IT PERTAINS
  TO THE RATE OF RETURN DATA INPUT.
- A: The depreciation sinking fund is a method of calculating depreciation that determines the payment required annually to generate a future dollar amount (e.g., the amount needed to replace the plant being depreciated), when accumulated at a given rate of interest for a period corresponding to the service life of the plant. In its calculation, LG&E uses its proposed rate of return (8.32%) in the sinking fund formula as the interest rate with which annual payments accumulate over the life of the plant. As in the case of both the rate of return and income tax elements, LG&E incorrectly applies a "net" return figure in its calculations. In the case of the depreciation sinking fund, however, the effect of LG&E's error is to understate the carrying costs associated with this element. This is because the accumulation of annual payments at the higher "net" return, all else being equal, would require smaller annual payments over the life of the plant to generate the desired future amount.

Consistent with my corrections to the other rate of return inputs to the pole formula, I have corrected the sinking fund element of the carrying charge by substituting an adjusted rate of return of 3.67% (calculated by multiplying the same net-to-gross ratio of .441 to LG&E's proposed rate of return of 8.32%) in place of LG&E's proposed rate of return of 8.32% in the formula used to calculate this element. <sup>28</sup> This produces a sinking fund factor that is properly applied to gross investment. As noted above, substituting a lower "gross" rate of return in the calculation of the sinking fund factor actually increases this factor (from 0.54% to 1.45%). Again, while I have used LG&E's proposed rate of return (adjusted to apply to gross pole investment) in my calculations, this figure is only a placeholder for the allowed rate of return ultimately authorized by the Commission in this case.

# Q: PLEASE EXPLAIN YOUR CORRECTION TO THE OPERATIONS AND MAINTENANCE ELEMENT OF THE CARRYING CHARGE FACTOR.

A: LG&E calculates the Operations and Maintenance (O&M) element of the carrying charge factor by taking the sum of the following three types of expenses: (1) Maintenance of Poles, Towers, and Fixtures as recorded in subaccount 593001; (2) Tree Trimming of Electric Distribution Routes as recorded in subaccount 593004; and (3) an assignment of total utility Administrative and General expenses to poles (based on the ratio of labor

<sup>&</sup>lt;sup>28</sup> The sinking fund factor is calculated using the following formula: Sinking Fund Factor = Proposed Rate of Return / [(1+ Proposed Rate of Return) Number of Years in Service - 1].

charged to subaccounts 593001 and 593004 to total utility labor expenses), and then dividing that sum by the gross plant in service in Account 364.<sup>29</sup>

LG&E's data input for gross pole plant in Account 364 (\$119,084,747) reconciles with the accounting records provided by LG&E in response to KCTA discovery. Similarly, LG&E's data inputs for the amounts of pole-related labor in 593001 (\$289,969) and 593004 (\$225,900) used to assign total Administrative and General expenses to poles reconcile with the accounting records provided by LG&E in response to KCTA discovery. However, that is not the case for LG&E's data inputs for Maintenance of Poles, Towers, and Fixtures in subaccount 593001 and Tree Trimming of Electric Distribution Routes in subaccount 593004. The expense figures used by LG&E (as identified in Seelye Exhibit 11), \$1,366,766 for maintenance and \$4,775,583 for tree trimming, differ from amounts reported in the accounting records of the Company.

It is essential to the integrity of the KPSC formula methodology that the utility not be allowed to make adjustments at will to its booked and audited accounting records, as LG&E appears to have done in this case. Accordingly, I have corrected LG&E's data inputs for maintenance and tree trimming expenses to conform to the amounts actually reported in LG&E's underlying accounting records for the test year. As shown in Attachments 3 and 4, respectively, to this testimony (containing the relevant pages from

<sup>&</sup>lt;sup>29</sup> See Seelye Exhibit 11, page 3.

<sup>&</sup>lt;sup>30</sup> See Attachment to LG&E's Response to KCTA 1-2, "LG&E KCTA 1-2 364 Oct 09" Worksheet, Row 855, which identifies the "Total" of Account 364.00 Poles, Towers and Fixtures plant investment as \$119,084,747, the same dollar amount identified by LG&E in Seelye Exhibit 11, page 3 for "Plant in Service – Account 364." This attachment was provided in an excel format that verifies the number appearing in Row 855 is the numerical sum of all entries recorded in this subaccount.

LG&E's accounting records provided to KCTA in discovery), the corrected expense amounts are \$452,820 for Maintenance of Poles, Towers, and Fixtures, and \$2,377,067 for Tree Trimming of Electric Distribution Routes.<sup>32</sup> Using these corrected data inputs has the effect of reducing the O&M element of the carrying charge factor from 5.73% to 2.94%.

# Q: WHAT IS THE EXPLANATION FOR LG&E'S USE OF DATA INPUTS THAT DO NOT RECONCILE TO ITS ACCOUNTING RECORDS?

A: In the case of its maintenance and tree trimming expense figures, LG&E has apparently adjusted its booked 593001 and 593004 accounting records to remove credits associated with certain storm related regulatory assets.<sup>33</sup> In neither instance do LG&E's explanations have merit or justify LG&E's deviations from its booked accounting records.

# Q: PLEASE EXPLAIN WHY LG&E'S ADJUSTMENT TO RECORDED TREE TRIMMING EXPENSES IS ERRONEOUS?

A: In allowing LG&E to create regulatory assets for accounting purposes pertaining to the cost recovery of storm-related expenses, the KPSC has recognized these expenses are extraordinary in nature, and are more appropriately amortized over a number of years in

<sup>&</sup>lt;sup>31</sup> See Attachment to LG&E's Response to KCTA 2-35, "LG&E Detail" Worksheet, Row 1208, and Attachment to LG&E's Response to KCTA 2-37, "LG&E Detail" Worksheet, Row 455.

<sup>&</sup>lt;sup>32</sup> See Attachment to LG&E's Response to KCTA 1-20, "Test Year" Worksheet, Rows 6827 and 12919 (relevant pages reproduced in Attachment 3 to this testimony), which identifies the "Total: Account 593001" (maintenance expense) as \$452,820.45, and the "Total: Account 593004" (tree trimming expense) as \$2,377,066.82. This attachment was provided in an excel format that verifies the numbers appearing in Rows 6827 and 12919, are the numerical sum of all entries recorded in subaccounts 593001 and 593004, respectively.

<sup>&</sup>lt;sup>33</sup> See Attachment to LG&E's Response to KCTA 1-20, "Test Year" Worksheet; see also LGE Response to KCTA Supplemental Data Request, April 2, 2010, Question No. 38.

order to minimize the severity of the impact in any given year on the utility's financial records.<sup>34</sup> That is why the KPSC has allowed LG&E to remove storm-related expenses from its FERC accounts and place them in a regulatory asset, for amortization over time. In adjusting its tree trimming expenses, LG&E has in effect undone that accounting adjustment. In other words, LG&E has taken the expenses it had moved into its regulatory asset and effectively reinserted them into Account 593 for purposes of its pole rate calculations. This results in what amounts to a double counting of these storm-related expenses.

As customers of the utility, there is no reason why cable attachers should be singled out for disparate treatment with respect to the amortization and rate recovery of storm-related tree trimming expenses. It would be unjust and unreasonable for cable attachers to be charged rates that include recovery of expenses deemed extraordinary, and accordingly, in excess of those appropriately recognized in the test year. Moreover, because the Commission has allowed cost recovery of these expenses to be amortized over multiple years, there would be double recovery of these expenses if on an annualized basis, cable attachment rates were based on the unadjusted total amount of particular storm-related expenses.

### Q: DOES THIS CONCLUDE YOUR TESTIMONY?

A: Yes, it does.

<sup>&</sup>lt;sup>34</sup> See Re: Louisville Gas & Electric Company, Case No. 2009-00175 (Ky. PSC Sep. 30, 2009); see also Application of Louisville Gas & Electric Company for an Order Approving the Establishment of a Regulatory Asset, Case No. 2008-00456 (Ky. PSC Dec. 22, 2008).

#### Attachment 1

#### Patricia D. Kraytin

57 Phillips Avenue Swampscott, MA 01907 781-593-8171 pdkravtin@comcast.net

### Summary

Consulting economist with specialization in telecommunications, cable, and energy markets. Extensive knowledge of complex economic, policy and technical issues facing incumbents, new entrants, regulators, investors, and consumers in rapidly changing telecommunications, cable, and energy markets.

### **Experience**

### **CONSULTING ECONOMIST**

2000-Present Independent Consulting Swampscott, MA

• Providing expert witness services and full range of economic, policy, and technical advisory services in the telecommunications, cable, and energy fields.

#### SENIOR VICE PRESIDENT/SENIOR ECONOMIST

1982–2000 Economics and Technology, Inc. Boston, MA

- Active participant in regulatory proceedings in over thirty state
  jurisdictions, before the Federal Communications Commission, Federal
  Energy Regulatory Commission, and other international regulatory
  authorities on telecommunications, cable, and energy matters.
- Provided expert witness and technical advisory services in connection with litigation and arbitration proceedings before state and federal regulatory agencies, and before U.S. district court, on behalf of diverse set of pubic and private sector clients (see Record of Prior Testimony).
- Extensive cable television regulation expertise in connection with implementation of the Cable Act of 1992 and the Telecommunications Act of 1996 by the Federal Communications Commission and local franchising authorities.
- Led analysis of wide range of issues related to: rates and rate policies; cost methodologies and allocations; productivity; cost benchmarking; business case studies for entry into cable, telephony, and broadband markets; development of competition; electric industry restructuring; incentive or performance based regulation; universal service; access charges; deployment of advanced services and broadband technologies; and access to pole attachments and other rights-of-way.

- Served as advisor to state regulatory agencies, assisting in negotiations with utilities, non-partial review of record evidence, deliberations and drafting of final decisions.
- Author of numerous industry reports and papers on topics including mark structure and competition, alternative forms of regulation, patterns of investment, telecommunications modernization, and broadband deployment (see listing of Reports and Studies).
- Invited speaker before various national organizations, state legislative committees and participant in industry symposiums.
- Grant Reviewer for Broadband Technology Opportunities Program (BTOP) administered by National Telecommunications and Information Administration (NTIA), Fall 2009.

#### RESEARCH/POLICY ANALYST

1978-1980 Various Federal Agencies

Washington, DC

- Prepared economic impact analyses related to allocation of frequency spectrum (Federal Communications Commission).
- Performed financial and statistical analysis of the effect of securities regulations on the acquisition of high-technology firms (Securities and Exchange Commission).
- Prepared analyses and recommendations on national economic policy issues including capital recovery. (U.S. Dept. of Commerce).

### Education

### 1980-1982 Massachusetts Institute of Technology Boston, MA

- Graduate Study in the Ph.D. program in Economics (Abd). General Examinations passed in fields of Government Regulation of Industry, Industrial Organization, and Urban and Regional Economics.
- National Science Foundation Fellow.

1976–1980 George Washington University Washington, DC

- B.A. with Distinction in Economics.
- Phi Beta Kappa, Omicron Delta Epsilon in recognition of high scholastic achievement in field of Economics. Recipient of four-year honor scholarship.

#### Prof. Affiliation

American Economic Association

## Reports and Studies (authored and co-authored)

Report on the Financial Viability of the Proposed Greenfield Overbuild in the City of Lincoln, California, prepared for Starstream Communications, August 12, 2003.

"Assessing SBC/Pacific's Progress in Eliminating Barriers to Entry, The Local Market in California is Not Yet 'Fully and Irreversibly Open," prepared for the California Association of Competitive Telecommunications Companies (CALTEL), August 2000.

"Final Report on the Qualifications of Wide Open West-Texas, LLC for a Cable Television Franchise in the City of Dallas," prepared for the City of Dallas, July 31, 2000.

"Final Report on the Qualifications of Western Integrated Networks of Texas Operating L.P. For a Cable Television Franchise in the City of Dallas," prepared for the City of Dallas, July 31, 2000.

"Price Cap Plan for USWC: Establishing Appropriate Price and Service Quality Incentives in Utah" prepared for The Division of Public Utilities, March, 2000.

"Building a Broadband America: The Competitive Keys to the Future of the Internet," prepared for The Competitive Broadband Coalition, May 1999.

"Broken Promises: A Review of Bell Atlantic-Pennsylvania's Performance under Chapter 30," prepared for AT&T and MCI Telecommunications, June 1998.

"Analysis of Opportunities for Cross Subsidies between GTA and GTA Cellular," prepared for Guam Cellular and Paging, submitted to the Guam Public Utilities Commission, July 11, 1997.

"Reply to Incumbent LEC Claims to Special Revenue Recovery Mechanisms," submitted in the Matter of Access Charge Reform in CC Docket 96-262, February 14, 1997.

"Assessing Incumbent LEC Claims to Special Revenue Recovery Mechanisms: Revenue opportunities, market assessments, and further empirical analysis of the 'Gap' between embedded and forward-looking costs," FCC CC Docket 96-262, January 29, 1997.

"Analysis of Incumbent LEC Embedded Investment: An Empirical Perspective on the 'Gap' between Historical Costs and Forward-looking TSLRIC," Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, FCC CC 96-98, May 30, 1996.

"Reply to X-Factor Proposals for the FCC Long-Term LEC Price Cap Plan," prepared for the Ad Hoc Telecommunications User Committee, submitted in FCC CC Docket 94-1, March 1, 1996.

"Establishing the X-Factor for the FCC Long-Terms LEC Price Cap Plan," prepared for the Ad Hoc Telecommunications User Committee, submitted in FCC CC Docket 94-1, December 1995.

"The Economic Viability of Stentor's 'Beacon Initiative,' exploring the extent of its financial dependency upon revenues from services in the Utility Segment," prepared for Unitel, evidence before the Canadian Radio-television and Telecommunications Commission, March 1995.

"Fostering a Competitive Local Exchange Market in New Jersey: Blueprint for Development of a Fair Playing Field," prepared for the New Jersey Cable Television Association, January 1995.

"The Enduring Local Bottleneck: Monopoly Power and the Local Exchange Carriers," Feb. 1994.

"A Note on Facilitating Local Exchange Competition," prepared for E.P.G., Nov. 1991.

"Testing for Effective Competition in the Local Exchange," prepared for the E.P.G., October 1991.

- "A Public Good/Private Good Framework for Identifying Pots Objectives for the Public Switched Network" prepared for the National Regulatory Research Institute, October 1991.
- "Report on the Status of Telecommunications Regulation, Legislation, and modernization in the states of Arkansas, Kansas, Missouri, Nebraska, Oklahoma and Texas," prepared for the Mid-America Cable-TV Association, December 13, 1990.
- "The U S Telecommunications Infrastructure and Economic Development," presented at the 18th Annual Telecommunications Policy Research Conference, Airlie, Virginia, October 1990.
- "An Analysis of Outside Plant Provisioning and Utilization Practices of US West Communications in the State of Washington," prepared for the Washington Utilities and Transportation Commission, March 1990.
- "Sustainability of Competition in Light of New Technologies," presented at the Twentieth Annual Williamsburg Conference of the Institute of Public Utilities, Williamsburg, VA, December 1988.
- "Telecommunications Modernization: Who Pays?," prepared for the National Regulatory Research Institute, September 1988.
- "Industry Structure and Competition in Telecommunications Markets: An Empirical Analysis," presented at the Seventh International Conference of the International Telecommunications Society at MIT, July 1988.
- "Market Structure and Competition in the Michigan Telecommunications Industry," prepared for the Michigan Divestiture Research Fund Board, April 1988.
- "Impact of Interstate Switched Access Charges on Information Service Providers Analysis of Initial Comments," submitted in FCC CC Docket No. 87-215, October 26, 1987.
- "An Economic Analysis of the Impact of Interstate Switched Access Charge Treatment on Information Service Providers," submitted in FCC CC Docket No. 87-215, September 24, 1987.
- "Regulation and Technological Change: Assessment of the Nature and Extent of Competition from a Natural Industry Structure Perspective and Implications for Regulatory Policy Options," prepared for the State of New York in collaboration with the City of New York, February 1987.
- "BOC Market Power and MFJ Restrictions: A Critical Analysis of the 'Competitive Market' Assumption," submitted to the Department of Justice, July 1986.
- "Long-Run Regulation of AT&T: A Key Element of a Competitive Telecommunications Policy," *Telematics*, August 1984.
- "Economic and Policy Considerations Supporting Continued Regulation of AT&T," submitted in FCC CC Docket No. 83-1147, June 1984.
- "Multi-product Transportation Cost Functions," MIT Working Paper, September 1982.

## **Record of Prior Testimony**

#### 2010

Before the Arkansas Public Service Commission, Coxcom, Inc., D/B/A Cox Communications, Complainant V. Arkansas Valley Electric Cooperative Corporation, Respondent. Docket No. 09-133-C, submitted March 17, 2010

#### 2009

Before the Circuit Court of the Thirteenth Judicial Circuit in and for Hillsborough County, State of Florida, Tampa Electric Company, Plaintiff, vs. Bright House Networks, LLC, Defendant, Case No. 06-00819, Division L. Expert Report submitted December 30, 2009, Deposition February 2, 2010, Cross-examination, March 24, 2010.

Before the Superior Court of the State Of Washington for the County of Pacific, Pacific Utility District No. 2 Of Pacific County, Plaintiff, V. Comcast of Washington Iv, Inc., CenturyTel of Washington, Inc., and Falcon Community Ventures I, L.P. D/B/A Charter Communications, Defendants, Case No. 07-2-00484-1, Expert Report submitted September 18, 2009, Reply Report submitted October 16, 2009.

Before the **Public Utilities Commission of Ohio**, In the Matter of the Application of Duke Energy Ohio, Inc., for an Increase in Electric Distribution Rates, Case No. 08-709-EL-AIR, In the Matter of the Application of Duke Energy Ohio, Inc., for a Tariff Approval, Case No. 08-710-EL-ATA, In the Matter of the Application of Duke Energy Ohio, Inc., for Approval to Change Accounting Methods, Case No. 08-11-EL-AAM, In the Matter of the Application of Cincinnati Gas & Electric Company for Approval of its Rider BDP, BacLG&Ep Delivery Point, Case No. 06-718-EL-ATA, filed February 26, 2009.

#### 2008

Before the Arkansas Public Service Commission, In the Matter of a Rulemaking Proceeding to Establish Pole Attachment Rules In Accordance With Act 740 of 2007, Docket No. 08-073-R, filed May 13, 2008, reply filed June 3, 2008, Cross-examination June 10, 2008.

Before the Federal Communications Commission, In the Matter of Implementation of Section 224 of the Act; Amendment of the Commission's Rules and Policies Governing Pole Attachments, WC Docket No. 07-245, RM 11293, RM 11303, filed March 7, 2008, reply filed April 22, 2008.

#### 2006

Before the State of New Jersey Board of Public Utilities, Office of Administrative Law, in the Matter of the Verified Petition of TCG Delaware Valley, Inc. and Teleport Communications New York for an Order Requiring PSE&G Co. to Comply with the Board's Conduit Rental Regulations, OAL Docket PUC 1191-06, BPU Docket No. EO0511005, filed September 29, 2006; rebuttal filed November 17, 2006.

Before the **Federal Communications Commission**, In the Matter of Florida Cable Telecommunications Association, Inc., Comcast Cablevision of Panama City, Inc.; Mediacom Southeast, L.L.C.; and Cox Communications Gulf, L.L.C.; Complainants v. Gulf Power Company, Respondent. EB Docket No. 04-381. Testimony on behalf of Complainants filed March 31, 2006, Deposition March 15, 2006, Cross-Examination April 26-27, 2006.

#### 2005

Before the United States District Court for the Eastern District of New York, Coastal Communication Service, Inc. and Telebeam Telecommunications Corporation, Plaintiffs - against -The City of New York and New York City Department of Information Technology and Telecommunications, 02 Civ. 2300 (RJD) (SMG), Expert Report filed February 4, 2005; Rebuttal Expert Report, filed August 29, 2005, Deposition December 1, 2005.

#### 2004

Before the Ontario Energy Board, In the Matter of the Ontario Energy Board Act 1998, S.O.1998, c.15, (Schedule B); and In the Matter of an Application pursuant to section 74 of the Ontario Energy Board Act, 1998 by the Canadian Cable Television Association for an Order or Orders to amend the licenses of electricity distributors, RP-2003-024, Reply Evidence, filed September 27, 2004 (jointly with Paul Glist), Cross-examination October 26-27, 2004.

#### 2003

Before the United States District Court for the Southern District of California, Level 3 Communications, LLC v. City of Santee, Civil Action No. 02-CV-1193, Rebuttal Expert Report, Filed July 18, 2003

#### 2002

Before the New York State Public Service Commission, In the Matter of the Cable Television & Telecommunications Association of New York, Inc., Petitioner, v. Verizon New York, Inc., Respondent, Case 02-M-1636, Affidavit filed December 19, 2002.

Before the West Virginia Public Service Commission, Community Antenna Service, Inc. v. Charter Communications, Case No. 01-0646-CTV-C, Live Direct Testimony and Cross-examination, June 12, 2002.

Before the Public Service Commission of the District of Columbia, Comcast Cablevision of the District, L.L.C., Complainant, v. Verizon Communications Inc. – Washington, D.C., Respondent, Formal Case No. 1006, Direct Testimony filed June 11, 2002; Rebuttal Testimony filed June 24, 2002.

Before the **Federal Communications Commission**, in Cavalier Telephone, LLC, Complainant, v. Virginia Electric & Power Co., D/b/a Dominion Virginia Power, Respondent, Case No. EB-02-MD-005, Declaration filed May 21, 2002.

Before the **Puerto Rico Telecommunications Regulatory Board**, in Re: Petition of Centennial Puerto Rico License Corp. for arbitration pursuant to Sections 252(b) of the Telecommunications Act of 1996 to Establish an Interconnection Agreement with Puerto Rico Telephone Company, on behalf of Centennial Puerto Rico License Corp., Direct Testimony filed April 16, 2002; Deposition May 7, 2002, May 14, 2002; Reply Testimony filed May 20, 2002, Cross-examination May 22, 2002.

Before the Federal Energy Regulatory Commission, in Re: In the Matter of Transcontinental Gas Pipe Line Corporation, Docket No. RP01-245, on behalf of the University of Maryland-College Park, Johns Hopkins University and Johns Hopkins University Health System, and the North Carolina Utilities Commission, Cross-answering Testimony filed January 23, 2002; Rebuttal Testimony filed May 31, 2002, Cross-examination July 31, 2002.

### 2001

Before the United States District Court for the Northern District of New York, TC Systems, Inc. and Teleport Communications-New York vs. Town of Colonie, New York, Civil Action No. 00-CV-1972, Expert Report filed November 16, 2001; Deposition December 7, 2001, Rebuttal Expert Report filed December 20, 2001, Deposition January 9, 2002.

Before the **Federal Energy Regulatory Commission**, in Re: In the Matter of **Transcontinental Gas Pipe Line Corporation**, Docket No. RP01-245, on behalf of the University of Maryland-College Park, Johns Hopkins University and Johns Hopkins University Health System, and the North Carolina Utilities Commission, filed November 15, 2001.

Before the **Public Service Commission of the District of Columbia**, Comcast Cable Communications, Inc. d/b/a/Comcast Cable of Washington, D.C., Complainant, v. Verizon Communications Inc. – Washington, D.C., Respondent, filed September 21, 2001.

Before the Public Utility Commission of Texas, State Office of Administrative Hearings, SOAH Docket No. 473-00-1014, PUC Docket No. 22349, Application of Texas-New Mexico Power Company for

Approval of Unbundled Cost of Service Rate Pursuant to PURA § 39.201 and Public Utility Commission Substantive Rule §25.344, on behalf of Cities Served by Texas-New Mexico Power, filed January 25, 2001.

#### 2000

Before the Puerto Rico Telecommunications Regulatory Board, in AT&T of Puerto Rico, Inc. et al v. Puerto Rico Telephone Company, Inc., Re: Dialing Parity, Docket Nos. 97-Q-0008, 98-Q-0002, on behalf of Lambda Communications Inc., Cross-examination October 19-20, 2000.

Before the Department of Telecommunications and Energy of the Commonwealth of Massachusetts, Docket No. DTE 98-57 – Phase III, Re: Bell Atlantic- Massachusetts Tariff No. 17 Digital Subscriber Line Compliance Filing and Line Sharing Filing, (Panel Testimony with Joseph Riolo, Robert Williams, and Michael Clancy) on behalf of Rhythms Links Inc. and Covad Communications Company, filed July 10, 2000.

Before the New York State Public Service Commission in Re: Proceeding on Motion of the Commission to Examine New York Telephone Company's Rates for Unbundled Network Elements on behalf of the Cable Television & Telecommunications Association of New York, Inc., Direct Testimony filed June 26, 2000, Supplemental Testimony filed November 29, 2000.

Before the Maryland Public Service Commission, on behalf of Rhythms Links Inc. and Covad Communications Company, filed jointly with Terry L. Murray and Richard Cabe, May 5, 2000.

Before the **Public Utility Commission of Texas**, in Re: Proceeding to Examine Reciprocal Compensation Pursuant to Section 252 of the Federal Telecommunications Act of 1996, CC Docket No. 21982, on behalf of AT&T Communications of Texas, L.P., TCG Dallas, and Teleport Communications Houston, Inc., filed March 31, 2000.

Before the Federal Communications Commission, in Re: In the Matter of Price Caps Performance Review for Local Exchange Carriers, Access Charge Reform, CC Dockets 94-1, 96-262, on behalf of Ad Hoc Telecommunications Users Committee, filed January 24, 2000.

Before the **Federal Energy Regulatory Commission**, in *Re: In the Matter of Northern Border Pipeline Company*, on behalf of the Canadian Association of Petroleum Producers and the Alberta Department of Resource Development, filed January 20, 2000.

#### 1999

Before the Connecticut Department of Public Utilities, in Re: Evaluation and Application to Modify Franchise Agreement by SBC Communications Inc., Southern New England telecommunications Corporation and SNET Personal Vision, Inc., Docket No. 99-04-02, on behalf of the Office of Consumer Counsel, filed June 22, 1999; cross-examination July 8, 1999

Before the Illinois Commerce Commission, in Re: Illinois Commerce Commission on its own Motion v. Illinois Bell Telephone Company; et al: Investigation into Non-Cost Based Access Charge Rate Elements in the Intrastate Access Charges of the Incumbent Local Exchange Carriers in Illinois, Illinois Commerce Commission on its own Motion Investigation into Implicit Universal Service Subsidies in Intrastate Access Charges and to Investigate how these Subsidies should be Treated in the Future, Illinois Commerce Commission on its own motion Investigation into the Reasonableness of the LS2 Rate of Illinois Bell Telephone Company, Docket No. 97-00601, 97-0602, 97-0516, Consolidated, on behalf of City of Chicago, filed January 4, 1999; rebuttal February 17, 1999.

Before the Puerto Rico Telecommunications Regulatory Board, in Re: In the Matter of Arbitration of Interconnection Rates, Terms and Conditions between Centennial Wireless PCS Operations Corp., Lambda Communications Inc., and the Puerto Rico Telephone Company, behalf of Centennial Wireless PCS Operations Corp. and Lambda Communications Inc., cross-examination February 16, 1999.

#### 1998

Before the California Public Utilities Commission, in Re: In the Matter of the Application of Pacific Bell (U 1001 C), a Corporation, for Authority for Pricing Flexibility and to Increase Prices of Certain Operator Services, to Reduce the Number of Monthly Assistance Call Allowances, and Adjust Prices for Four Centrex Optional Features, Application No. 98-05-038, on behalf of County of Los Angeles, filed November 17, 1998, cross-examination, December 9, 1998.

Before the Puerto Rico Telecommunications Regulatory Board, in Re: In the Matter of PRTC's Tariff K-2 (Intra-island access charges), Docket no. 97-Q-0001, 97-Q-0003, on behalf of Lambda Communications, Inc., filed October 9, 1998, cross-examination October 9, 1998.

Before the Connecticut Department of Public Utility Control, in Re: Application of the Southern New England Telephone Company, Docket no. 98-04-03, on behalf of the Connecticut Office of Consumer Counsel, filed August 17, 1998, cross-examination February 18, 1999.

Before the California Public Utilities Commission, in Re: Pacific Gas & Electric General Rate Case, A.97-12-020, on behalf of Office of Rate Payers Advocates CA PUC, filed June 8, 1998.

#### 1997

Before the South Carolina Public Service Commission, in Re: Proceeding to Review BellSouth Telecommunications, Inc. 's Cost for Unbundled Network Elements, Docket no. 97-374-C, on behalf of the South Carolina Cable Television Association, filed November 17, 1997.

Before the **State Corporation Commission of Kansas**, in Re: In the Matter of and Investigation to Determine whether the Exemption from Interconnection Granted by 47 U.S.C. 251(f) should be Terminated in the Dighton, Ellis, Wakeeney, and Hill City Exchanges, Docket No. 98-GIMT-162-MIS, on behalf of classic Telephone, Inc., filed October 23, 1997.

Before the Georgia Public Services Commission, in Re: Review of Cost Studies, Methodologies, and Cost-Based Rates for Interconnection and Unbundling of BellSouth Telecommunications Services, Docket No. 7061-U, on behalf of the Cable Television Association of Georgia, filed August 29, 1997, cross-examination September 19, 1997.

Before the Federal Communications Commission, in Re: In the Matter of Price Caps Performance Review for Local Exchange Carriers, Access Charge Reform, CC Dockets 94-1, 96-262, on behalf of Ad Hoc Telecommunications Users Committee, filed July 11, 1997.

Before the Federal Communications Commission, in Re: In the Matter of Amendment of Rules and Policies Governing Pole Attachments, CS Docket 97-98, on behalf of NCTA, filed June 27, 1997.

Before the **Public Utilities Commission of the State of California**, in Re: Rulemaking on the Commission's Own Motion to Govern Open Access to Bottleneck Services and Establish a Framework for Network Architecture Development of Dominant Carrier Networks, R.93-04-003, I.93-04-002AT&T, filed March 19, 1997, reply April 7, 1997.

Before the **Puerto Rico Telecommunications Regulatory Board**, in *Re: In the Matter of Centennial Petition for Arbitration with PRTC*, on behalf of Centennial Cellular Corporation, filed February 14, 1997, supplemental March 10, 1997.

Before the Federal Communications Commission, in Re: In the Matter of Access Charge Reform, CC Docket 96-262, on behalf of AT&T, filed January 29, 1997, reply February 14, 1997.

#### 1996

Before the New Jersey Board of Public Utilities, in Re: In the Matter of the Investigation Regarding Local Exchange Competition for Telecommunications Services, TX95120631, on behalf of New Jersey Cable Television Association, filed on August 30, 1996, reply September 9, 1997, October 20, 1997, cross-examination September 12, 1996, December 20, 1996.

Before the State Corporation Commission of the State of Kansas, in Re: In the Matter of a General Investigation Into Competition Within the Telecommunications Industry in the State of Kansas, 190, 492-U 94-GIMT-478-GIT, on behalf of Kansas Cable Telecommunications Association, Inc., filed July 15, 1996, cross-examination August 14, 1996.

Before the **Federal Communications Commission**, in *Re: Price Caps Performance Review for Local Exchange Carriers*, CC Docket 94-1, on behalf of Ad Hoc Telecommunications Users Committee, filed July 12, 1996.

Before the State Corporation Commission of the State of Kansas, in Re: In the Matter of a General Investigation Into Competition Within the Telecommunications Industry in the State of Kansas, 190, 492-U 94-GIMT-478-GIT, on behalf of Kansas Cable Telecommunications Association, Inc., filed June 14, 1996, cross-examination August 14, 1996.

Before the Federal Communications Commission, in Re: In the Matter of Implementation of the Local Competition Provisions of Telecommunications Act of 1996, CC Docket 96-98, filed May 1996.

Before the Federal Communications Commission, in Re: Puerto Rico Telephone Company (Tariff FCC No, 1), Transmittal No. 1, on behalf of Centennial Cellular Corp., filed April 29, 1996.

Before the United States District Court for the Eastern District of Tennessee at Greeneville, in Re: Richard R. Land, Individually and d/b/a The Outer Shell, and on behalf of all others similarly situated, Plaintiffs, vs. United Telephone-Southeast, Inc., Defendant, CIV 2-93-55, filed December 7, 1996.

#### 1995

Before the Federal Communications Commission, in Re: Bentleyville Telephone Company Petition and Waiver of Sections 63.54 and 63.55 of the Commission's Rules and Application for Authority to Construct and Operate, Cable Television Facilities in its Telephone Service Area, W-P-C-6817, on behalf of the Helicon Group, L.P. d/b/a Helicon Cablevision, filed November 2, 1995.

Before the US District Court for the Eastern District of Tennessee, in Re. Richard R. Land, Individually and d/b/a The Outer Shell, and on behalf of all others similarly situated, Plaintiffs, vs. United Telephone-Southeast, Inc., Defendant, 2-93-55, Class Action, filed June 12, 1995.

Before the Connecticut Department of Public Utility Control, in Re: Application of SNET Company for approval to trial video dial tone transport and switching, 95-03-10, on behalf of New England Cable TV Association, filed May 8, 1995, cross-examination May 12, 1995.

Before Canadian Radio-Television and Telecommunications Commission, in Re: CRTC Order in Council 1994-1689, Public Notice CRTC 1994-130 (Information Highway), filed March 10, 1995.

Before the **Federal Communications Commission**, in *Re: GTE Hawaii's Section 214 Application to provide Video Dialtone in Honolulu, Hawaii*, W-P-C- 6958, on behalf of Hawaii Cable TV Association, filed January 17, 1995 (Reply to Amended Applications).

Before the **Federal Communications Commission**, in *Re: GTE Hawaii's Section 214 Application to provide Video Dialtone in Ventura County*, W-P-C 6957, on behalf of the California Cable TV Association, filed January 17, 1995 (Reply to Amended Applications).

Before the **Federal Communications Commission**, in Re: GTE Florida's Section 214 Application to Provide Video Dialtone in the Pinellas County and Pasco County, Florida areas, W-P-C 6956, on behalf of Florida Cable TV Association, filed January 17, 1995 (Reply to Amended Applications).

Before the Federal Communications Commission, in Re: GTE Virginia's Section 214 Application to provide Video Dialtone in the Manassas, Virginia area, W-P-C 6956, on behalf of Virginia Cable TV Association, filed January 17, 1995 (Reply to Amended Applications).

#### 1994

Before the **Federal Communications Commission**, in *Re: NET's Section 214 Application to provide Video Dialtone in Rhode Island and Massachusetts*, W-P-C 6982, W-P-C 6983, on behalf of New England Cable TV Association, filed December 22, 1994 (Reply to Supp. Responses).

Before the **State Corporation Commission of the State of Kansas**, in *Re. General Investigation into Competition*, 190, 492-U 94-GIMT-478-GIT, on behalf of Kansas CATV Association, filed November 14, 1994, cross-examination December 1, 1994.

Before the **Federal Communication Commission**, in *Re: Carolina Telephone's Section 214 Application to provide Video Dialtone in areas of North Carolina*, W-P-C 6999, on behalf of North Carolina Cable TV Association, filed October 20, 1994, reply November 8, 1994.

Before the Federal Communication Commission, in Rev NET's Section 214 Application to provide Video Dialtone in Rhode Island and Massachusetts, W-P-C 6982, W-P-C 6983, on behalf of New England Cable TV Association, filed September 8, 1994, reply October 3, 1994.

Before the California Public Utilities Commission, in Re: Petition of GTE-California to Eliminate the Preapproval Requirement for Fiber Beyond the Feeder, I.87-11-033, on behalf of California Bankers Clearing House, County of LA, filed August 24, 1994.

Before the **Federal Communications Commission**, in *Re: BellSouth Telecommunications Inc., Section 214 Application to provide Video Dialtone in Chamblee, GA and DeKalb County, GA*, W-P-C 6977, on behalf of Georgia Cable TV Association, filed August 5, 1994.

Before the **Federal Communications Commission**, in Re: Bell Atlantic Telephone Companies Section 214 Application to provide Video Dialtone within their Telephone Services Areas, W-P-C 6966, on behalf of Mid Atlantic Cable Coalition, filed July 28, 1994, reply August 22, 1994.

Before the **Federal Communication Commission**, in *Re: GTE Hawaii's 214 Application to provide Video Dialtone in Honolulu, Hawaii*, W-P-C 6958, on behalf of Hawaii Cable TV Association, filed July 1, 1994, and July 29, 1994.

Before the **Federal Communication Commission**, in *Re. GTE California's Section 214 Application to provide Video Dialtone in Ventura County*, W-P-C 6957, on behalf of California Cable TV Association, filed July 1, 1994, and July 29, 1994.

Before the **Federal Communication Commission**, in *Re: GTE Florida's 214 Application to provide Video Dialtone in the Pinellas and Pasco County, Florida areas*, W-P-C 6956, on behalf of Florida Cable TV Association, filed July 1, 1994, and July 29, 1994.

Before the **Federal Communication Commission**, in *Re: GTE Virginia 's 214 Application to provide Video Dialtone in the Manassas, Virginia area*, W-P-C 6955, on behalf of the Virginia Cable TV Association, filed July 1, 1994, and July 29, 1994.

Before the **Federal Communications Commission**, in *Re: US WEST's Section 214 Application to provide Video Dialtone in Boise, Idaho and Salt Lake City, Utah*, W-P-C 6944-45, before the Idaho and Utah Cable TV Association, filed May 31, 1994.

Before the Federal Communication Commission, in Re: US WEST's Section 214 Application to provide Video Dialtone in Portland, OR; Minneapolis, St. Paul, MN; and Denver, CO, W-P-C 6919-22, on behalf of Minnesota & Oregon Cable TV Association, filed March 28, 1994.

Before the **Federal Communications Commission**, in Re: Ameritech's Section 214 Application to provide Video Dialtone within areas in Illinois, Indiana, Michigan, Ohio, and Wisconsin, W-P-C-6926-30, on behalf of Great Lakes Cable Coalition, filed March 10, 1994, reply April 4, 1994.

Before the **Federal Communications Commission**, in *Re: Pacific Bell's Section 214 Application to provide Video Dialtone in Los Angeles, Orange County, San Diego, and Southern San Francisco Bay areas*, W-P-C-6913-16, on behalf of Comcast/Cablevision Inc., filed February 11, 1994, reply March 11, 1994.

Before the **Federal Communications Commission**, in *Res SNET's Section 214 Application to provide Video Dialtone in Connecticut*, W-P-C 6858, on behalf of New England Cable TV Association, filed January 20, 1994, reply February 23, 1994.

#### 1993

Before the Arkansas Public Service Commission, in Re: Earnings Review of Southwestern Bell Telephone Company, 92-260-U, on behalf of Arkansas Press Association, filed September 2, 1993.

Before the United States District Court for the Eastern District of Tennessee at Greenville, in Re: Cleo Stinnett, et al. Vs. BellSouth Telecommunications, Inc. d/b/a/ South Central Bell Telephone Company, Defendant, Civil Action No 2-92-207, Class Action, cross-examination May 10, 1993, and February 10, 1994.

Before the Federal Communications Commission, in Re: NJ Bell's Section 214 Application to provide Video Dialtone service within Dover Township, and Ocean County, New Jersey, W-P-C-6840, on behalf of New Jersey Cable TV Association, filed January 21, 1993.

#### 1992

Before the New Jersey Board of Regulatory Commissioners, in Re. NJ Bell Alternative Regulation, T092030358, on behalf of NJ Cable TV Association, filed September 21, 1992.

Before the New Hampshire Public Utilities Commission, in Re: Generic competition docket, DR 90-002, on behalf of Office of the Consumer Advocate, filed May 1, 1992, reply July 10, 1992, Surrebuttal August 21, 1992.

Before the New Jersey General assembly Transportation, Telecommunications, and Technology Committee, Concerning A-5063, on behalf of NJ Cable TV Association, filed January 6, 1992.

#### 1991

Before the New Jersey Senate Transportation and Public Utilities Committee, in Re: Concerning Senate Bill S-3617, on behalf of New Jersey Cable Television Association, filed December 10, 1991.

Before the 119<sup>th</sup> Ohio General Assembly Senate Select Committee on Telecommunications Infrastructure and Technology, in Res Issues Surrounding Telecommunications Network Modernization, on behalf of the Ohio Cable TV Association, filed March 7, 1991.

Before the Tennessee Public Service Commission, in Re: Master Plan Development and TN Regulatory Reform Plan, on behalf of TN Cable TV Association, filed February 20, 1991.

#### 1990

Before the Tennessee Public Service Commission, in Re: Earnings Investigation of South Central Bell, 90-05953, on behalf of the TN Cable Television Association, filed September 28, 1990.

Before the New York Public Service Commission, in Re. NYT Rates, 90-C-0191, on behalf of User Parties NY Clearing House Association, filed July 13, 1990, Surrrebuttal July 30, 1990.

Before the Louisiana Public Service Commission, in Re: South Central Bell Bidirectional Usage Rate Service, U-18656, on behalf of Answerphone of New Orleans, Inc., Executive Services, Inc., King Telephone Answering Service, et al, filed January 11, 1990.

#### 1989

Before the Georgia Public Service Commission, in Re: Southern Bell Tariff Revision and Bidirectional Usage Rate Service, 3896-U, on behalf of Atlanta Journal Const./Voice Information Services Company, Inc., GA Association of Telemessaging Services, Prodigy Services, Company, Telnet Communications, Corp., filed November 28, 1989.

Before the New York State Public Service Commission, in Re: NYT Co. - Rate Moratorium Extension - Fifth Stage Filing, 28961 Fifth Stage, on behalf of User Parties NY Clearing House Association Committee of Corporate Telecommunication Users, filed October 16, 1989.

Before the **Delaware Public Service Commission**, in Re: Diamond State Telephone Co. Rate Case, 86-20, on behalf of DE PSC, filed June 16, 1989.

Before the Arizona Corporation Committee, in *Re: General Rate Case*, 86-20, on behalf of Arizona Corporation Committee, filed March 6, 1989.

#### 1988

Before New York State Public Service Commission, in Re: NYT Rate Moratorium Extension, 28961, on behalf of Capital Cities/ ABC, Inc., AMEX Co., CBS, Inc., NBC, Inc., filed December 23, 1988.

#### 1987

Before Rhode Island Public Utilities Commission, in Re: New England Telephone, 1475, on behalf of RI Bankers Association, filed August 11, 1987, cross-examination August 21, 1987.

Before the New York State Public Service Commission, in Re: General Rate Case Subject to Competition, 29469, on behalf of AMEX Co., Capital Cities/ ABNC, Inc., NBC, Inc., filed April 17, 1987, cross-examination May 20, 1987.

Before the Minnesota Public Utilities Commission, in Re. Northwestern Bell, P-421/ M-86-508, on behalf of MN Bus. Utilities Users Counsel filed February 10, 1987, cross-examination March 5, 1987.

#### 1986-1982

Before the Kansas Public Utilities Commission, in Res Southwestern Bell, 127, 140-U, on behalf of Boeing Military, et al., filed August 15, 1986.

Before the Washington Utilities and Transportation Commission, in Re: Cost of Service Issues bearing on the Regulation of Telecommunications Company, on behalf of US Department of Energy, filed November 18, 1985 (Reply Comments).

Before the Maine Public Utilities Commission, in Re: New England Telephone, 83-213, on behalf of Staff, ME PUC, filed February 7, 1984, cross-examination March 16, 1984.

Before the Minnesota Public Service Commission, in Re: South Central Bell, U-4415, on behalf of MS PSC, filed January 24, 1984, cross-examination February 1984.

Before the Kentucky Public Service Commission, in Re: South Central Bell, 8847, on behalf of KY PSC, filed November 28, 1983, cross-examination December 1983.

Before the Florida Public Service Commission, in *Re: Southern Bell Rate Case*, 820294-TP, on behalf of Florida Department of General Services, FL Ad Hoc Telecommunications Users, filed March 21, 1983, cross-examination May 5, 1983.

Before the Maine Public Utilities Commission, in Re: New England Telephone, 82-142, on behalf of Staff, ME PUC, filed November 15, 1982, cross-examination December 9, 1982.

Before the **Kentucky Public Service Commission**, in *Re: South Central Bell*, 8467, on behalf of the Commonwealth of Kentucky, cross-examination August 26, 1982.

# Attachment 2

# **Rate Calculations**

# **CATV Attachment Charges**

( LG&E - Test Year Ending October 31, 2009)

## CALCULATION OF MAXIMUM POLE ATTACHMENT RATES UNDER FCC FORMULA

FORMULA		Kravtin
DATA FOR YR ENDING	31-Oct-09	Attachment 2
Louisville Gas & Electric		Page 1/3
Weighted Average Bare Pole Cost	Two- User	Three-User
Installed Costs		and the second s
35' Poles	\$9,882,811.00	n/a
40' Poles	\$25,990,673.00	\$25,990,673.00
45" Poles	n/a	\$22,752,748.00
Sum Installed Costs	\$35,873,484.00	\$48,743,421.00
- Investment in Minor Appurtenances	\$5,381,022.60	<u>\$7,311,513.15</u>
= Investment in Bare Pole Plant	\$30,492,461.40	\$41,431,907.85
Quantity of Poles		
35' Poles	22,008	n/a
40' Poles	61,101	61,101
45" Poles	n/a	22,054
/ Sum Quantity	83,109	83,155
=Weighted Average Cost per Bare Pole	\$366.90	\$498.25
Carrying Charges		
Rate of Return	8.32%	8.32%
Net Investment Acct 364 Pole Plant/	\$52,553,493.00	\$52,553,493.00
Gross Investment Acct 364 Pole Plant	\$119,084,747.00	\$119,084,747.00
Ratio Net to Gross Plant	0.441	0.441
Rate of Return Applied to Gross Pole Plant	3.67%	3.67%
Depreciation		
Rate of Return Applied to Gross Pole Plant	3.67%	3.67%
Number of Years Plant in Service	35	35
Sinking Fund Factor (formula per Resp KCTA Q-15)	1.45%	1.45%
Income Tax		
Return on Equity Component of ROR	11.50%	11.50%
x Percentage Equity	53.86%	53.86%
= Return on Equity Component	6.19%	6.19%
Net Investment Acct 364 Pole Plant/	\$52,553,493.00	\$52,553,493.00
Gross Investment Acct 364 Pole Plant	\$119,084,747.00	\$119,084,747.00
= Ratio Net to Gross Plant	0.441	0.441
Return on Equity Applied to Gross Pole Plant	2.73%	2.73%
Composite Fed. And State Income Tax Rate	36.93%	36.93%
Income Tax Factor (formula per Seelye Exh. 8)	1.60%	1.60%

Property Tax and Insurance		Page 2/3
Percentage Applicable to Poles (per Resp KCTA Q-18)	0.22%	0.22%
Operation and Maintenance		
Labor Charged to Maintenance Accts 593001+593004	\$515,869.00	\$515,869.00
Total Labor	\$56,166,593.00	\$56,166,593.00
Ratio Designated 593 Labor to Total Labor	0.92%	0.92%
Total A&G Expenses	\$73,557,685.00	\$73,557,685.00
A&G Expenses Assigned to Poles	\$675,599.63	\$675,599.63
Maintenance of Poles, Towers & Fixtures Acct		
593001	\$452,820.45	\$452,820.45
Tree Trimming Elec. Distribution Routes Acct 593004	\$2,377,066.82	\$2,377,066.82
Sum Expenses Assigned to Poles	\$3,505,486.90	\$3,505,486.90
Gross Investment Acct 364 Pole Plant	\$119,084,747.00	\$119,084,747.00
O&M Expense Factor	2.94%	2.94%
Total Carrying Charges	9.89%	9.89%
Usage Space Factor		
KPSC Usage Space Factor	0.1224	0.0759
Maximum Pole Attachment Rates		
Investment Per Bare Pole	\$366.90	\$498.25
*Carrying Charges	9.89%	9.89%
*Charge Factor	12.24%	7.59%
Maximum Pole Attachment Rate	\$4.44	\$3.74
Estimated Number of Attachments	17,699	68,646
Percentage of Total Attachments	20.50%	79.50%
r ercentage or rotal Attachments	20.0076	7 3.30 70
Maximum Weighted Pole Attachment Rate	\$3.	88

\*

## **DATA ENTRY AND SOURCE**

DATA ENTRY AND SOURCE		
Gross Investment in 364	\$119,084,747.00	Attach. to LGE Resp. to KCTA 1-2
Depreciation Reserve for 364	\$66,531,254.00	Resp. to KCTA Q-8
Overall Rate of Return	8.32%	Placeholder KPSC No.
Return on Equity Component of ROR	11.50%	Placeholder KPSC No.
Percentage Equity Component	53.86%	Placeholder KPSC No.
Composite Fed. And State Income Tax Rate	36.93%	Resp. to KCTA Q-16
Percentage Reduction Appurtenances	0.15	KPSC Formula
Maintenance of Poles, Towers & Fixtures Acct		Attach. to LGE Resp. to KCTA 1-20
593001	452,820.45	
Troo Trimming Flog Distribution Pouton Acet 502004	2 277 066 92	Attach. to LGE Resp. to KCTA 1-20
Tree Trimming Elec. Distribution Routes Acct 593004 Total A& G Expenses	2,377,066.82 73,557,685.00	Seelye Ex. 11
Labor Charged to 593001	289,969.00	Seelye Ex. 11
Labor Charged to 593004	225,900.00	Seelye Ex. 11
Sum Labor 593001,593004	515,869.00	Secrye Lx. 11
Total Labor	56,166,593.00	Seelye Ex. 11
Ratio 593 Labor / Total Labor	0.00918	333,73 2 2.2.
A&G Expenses Assigned to Poles		
Estimated Number of Attachments (2-user)	17,699	Seelye Ex. 11
Estimated Number of Attachments (3-user)	68,646	Seelye Ex. 11
Installed Costs		
35' Poles	\$9,882,811.00	Attach. to LGE Resp. to KCTA 1-2
40' Poles	\$25,990,673.00	Attach. to LGE Resp. to KCTA 1-2
45" Poles	\$22,752,748.00	Attach. to LGE Resp. to KCTA 1-2
Quantity of Poles		
•	20.000	Attach, to LGE Resp. to KCTA 1-2
35' Poles	22,008	Attach. to LGE Resp.
40' Poles	61,101	to KCTA 1-2
45" Poles	22,054	Attach, to LGE Resp. to KCTA 1-2

# Attachment 3

Attachment to LG&E Response to KCTA 1-20

LG&E Activity in Accounts 592 and 593

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# Attachment 4

Attachment to LG&E Response to KCTA 1-20
LG&E Activity in Accounts 592 and 593
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### VERIFICATION

The undersigned, Patricia D. Kravtin, being duly sworn, deposes and states that she is the Proprietor of Patricia D. Kravtin Economic Consulting, that she has personal knowledge of the matters set forth in the foregoing testimony and exhibits, and the answers contained therein are true and correct to the best of her information, knowledge, and belief.

Patricia D. Kravtin

Swom to before me this 22 day of April, 2010.

Notary Public of the

Commonwealth of Massachusetts

My Commission Expires 12/26/2014

MAUREEN C. SHULTZ

Notary Public

COMMONMEATH OF MASSACHUSETTS

My Commission Expires

Docomber 25, 2014

## **CERTIFICATE OF SERVICE**

This is to certify that a true and correct copy of the foregoing was served upon the following, by U.S. Mail, postage prepaid, on this the 22 day of April, 2010

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